

CLAIMS

1. A system for locating a mobile unit (4) including:
- 5 means (3₁, 3₂, 3₃, 3₄, 3₅) for transmitting a first signal (24₁) at a relatively high power (P₁);
- means (3₁, 3₂, 3₃, 3₄, 3₅) for transmitting a second signal (24₂) at a predetermined, relatively low power (P₁);
- means (4) for receiving said first signal;
- 10 means (4) for determining a first signal strength of said first signal at said means for receiving said first signal;
- means (4) for determining whether said first signal strength exceeds a relatively low threshold level (P_A) so as to determine whether service may be provided;
- 15 means (4) for receiving said second signal;
- means (4) for determining a second signal strength of said second received at received at said means for receiving said second signal;
- means (4) for determining whether said second signal strength exceeds a relatively high threshold level (P_B) so as to locate the mobile unit within a
- 20 known distance (R) of said means for transmitting said second signal.
2. A system according to Claim 1, wherein said relatively high power (P₁) is at least 0 dBm.
- 25 3. A system according to Claim 1 or 2, wherein said relatively high power (P₁) is at least 6 dBm, 13 dBm or 20 dBm.
4. A system according to any preceding Claim, said relatively low power (P₂) is no more than 0 dBm.
- 30 5. A system according to any preceding Claim, wherein said relatively low threshold level (P_A) is no more than -85 dBm.

6. A system according to any preceding Claim, wherein said relatively high threshold level (P_A) is no less than -65 dBm.
- 5 7. A system according to any preceding claim, wherein said means ($3_1, 3_2, 3_3, 3_4, 3_5$) for transmitting said first and second signals transmit said first and second signals ($24_1, 24_2$) at different times.
8. A system according to any preceding Claim, which is a wireless
10 local area network (1).
9. A system according to Claim 8, wherein said means ($3_1, 3_2, 3_3, 3_4, 3_5$) for transmitting said first signal (24_1) is an access point.
- 15 10. A system according to Claim 8 or 9, wherein said means ($3_1, 3_2, 3_3, 3_4, 3_5$) for transmitting said second signal (24_2) is an access point.
11. A system according to any one of Claims 8 to 10, wherein said means (4) for receiving said first signal (24_1) is a mobile unit.
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12. A system according to any one of Claims 8 to 11, wherein said means (4) for receiving said second signal (24_2) is a mobile unit.
13. A system according to Claim 8, wherein said means (4) for
25 transmitting said first signal (24_1) is a mobile unit.
14. A system according to Claim 8 or 13, wherein said means (4) for transmitting said second signal (24_2) is a mobile unit.
- 30 15. A system according to any one of Claims 8, 13 or 14, wherein said means ($3_1, 3_2, 3_3, 3_4, 3_5$) for receiving said first signal (24_1) is an access point.

16. A system according to any one of Claim 8, 13, 14 or 15, wherein said means (3₁, 3₂, 3₃, 3₄, 3₅) for receiving said second signal (24₂) is an access point.

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17. A system substantially as hereinbefore described with reference to Figures 1 to 7 of the accompanying drawings.

18. A system for locating a mobile unit (4) including:
10 a first transmitter (9, 10) for transmitting a first signal (24₁) at a relatively high power (P₁);
a second transmitter (9, 10) for transmitting a second signal (24₂) at a predetermined, relatively low power (P₂);
a first receiver (18) for receiving said first signal;
15 a first detector (17, 16) for determining a first signal strength of said first signal at said first receiver;
a first controller (19) for determining whether said first signal strength exceeds a relatively low threshold level so as to determine whether service may be provided;
20 a second receiver (18) for receiving said second signal;
a second detector (17, 16) for determining a second signal strength of said second signal at said second receiver;
a second controller (19) for determining whether said second signal strength exceeds a relatively high threshold level so as to locate the mobile
25 unit within a known distance of said means for transmitting said second signal.

19. An access point (3₁, 3₂, 3₃, 3₄, 3₅) configured for use in the system according to any preceding Claim.